

## **RESOURCE ASSESSMENT COMPLEMENTARY PROGRAM PROJECT ABSTRACTS**

### **Task 1: Reserve Estimate for the Marcellus Shale in the Appalachian Basin**

The current industry interest in gas and oil bearing shale reservoirs has lead NETL to look at the Appalachian Basin in more detail to determine the potential from the deepest of the Devonian Shale formations. The Eastern Gas Shale Program that DOE provided funding for included over thirty cored wells and up to twenty logs per well. A follow on project by GRI cored and tested several more wells across the basin and primarily tested the shallower shale formations on the western side of the basin. This information has been archived on DVD by NETL and provides a basis for the next characterization effort of the Devonian Marcellus Shale. A quick review of well data shows there are only a handful of wells that have sampled the Marcellus in the deeper part of the basin. West Virginia and Pennsylvania geological surveys show that there are several thousand wells that penetrate the Marcellus Shale and have well logs that can be utilized to develop a better estimate of gas in place for this recent industry target. A coordinated effort between the university research institute, the state surveys, and industry will aid this evaluation.

### **Task 2: EPAct Knowledge Management Database**

The EPACT Knowledge Management Database, KMD, is a central repository for Research and Development (R&D) results and products related to the recently implemented “Section 999 R&D Program.” Subtitle J, Section 999, of the Energy Policy Act (EPAct) of 2005, called for the establishment of an Ultra-Deepwater and Unconventional Natural Gas and Other Petroleum Resources Research and Development Program. The legislation identifies three program elements to be administered by a consortium under contract to the Department of Energy. Complementary research performed by the National Energy Technology Laboratory (NETL) is a fourth program element. NETL is also tasked with managing the RPSEA consortium. In addition to archiving the results of the Section 999 R&D Program, this repository will also include other related research products that have been generated by the traditional oil and gas research program at the NETL Strategic Center for Natural Gas and Oil (SCNGO).

This repository is envisioned as a “Web site portal” within the larger NETL Web site. The proposed features include an interactive map display capability and a feature that permits zooming in on high resolution images. Also, at least two “expert system” interactive problem solving features will need to be integrated into this portal. One of these, the Produced Water Information System (PWIS) is already in the process of being added to the NETL Web site. The other, a self-teaching expert system (SETES) for the analysis and prediction of gas production from fractured shales, is to be built by Lawrence Berkeley National Lab under one of the selected R&D projects administered by the Consortium.

The purpose of this Web site portal will be to provide a single place where users can find all of the results and products produced by the Section 999 R&D program, and more importantly, can locate information within this portfolio of products that they need, quickly. Accordingly, the

Web site must be simple and easy to understand, easily navigable, quick to use, and comprehensive.